

Atty Docket: 4081-01701
(09/660,450US1)

Patent

AMENDMENTS TO THE CLAIMS

Listing Of Claims:

1. (Currently Amended) A ~~linear alpha-olefin dimer product~~ made by a process comprising coupling of an initial olefin and a second olefin, wherein ~~a the~~ product of the process comprises (a) mixed dimers, from about 30 to about 85 weight percent of which are linear alpha-olefin dimers and ~~about equal to or greater than 20 weight percent of the initial and second olefins are converted to linear alpha-olefin dimers~~ (b) less than about 80 weight percent initial and second olefins.
2. (Currently Amended) The ~~dimer product~~ of claim 1 ~~made by the process~~ wherein the coupling is a head to head coupling accomplished by a 1,2 insertion in the initial olefin followed by a 2,1 insertion in the second olefin resulting in a complex which beta-eliminates to produce the ~~linear dimer dimers~~.
3. (Currently Amended) The ~~dimer product~~ of claim 2 ~~made by the process~~ wherein the coupling further results in byproducts comprising methyl-branched olefin dimers.
4. (Currently Amended) The ~~dimer product~~ of claim 3 ~~made by the process~~ wherein the byproducts of the process further comprise olefin trimers.
5. (Currently Amended) The ~~dimer product~~ of claim 2 ~~made by the process~~ wherein the ~~products of the process mixed dimers~~ comprise less than about five weight percent vinylidene or tri-substituted olefins.
6. (Currently Amended) The ~~dimer product~~ of claim 2 ~~made by the process~~ wherein the coupling further results in byproducts comprising vinylidene.
7. (Currently Amended) The ~~dimer product~~ of claim 1 ~~made by the process~~ wherein the initial olefin is butene and the second olefin is butene and the dimer is a 1-butene dimer.

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8. (Currently Amended) The ~~dimer-product~~ of claim 1 ~~made by the process~~ wherein the initial olefin and the second olefin are selected from the group consisting of alpha olefins consisting of about five to about eight carbon atoms.

9. (Currently Amended) The ~~dimer-product~~ of claim 1 ~~made by the process~~ wherein the initial olefin and the second olefin are selected from the group consisting of alpha olefins consisting of about nine or more carbon atoms.

10-18 (Canceled)

19. (Currently Amended) A feedstock for the production of oxoalcohols comprising the ~~dimer product~~ of claim 1.

20-28 (Canceled)

29. (Currently Amended) The ~~dimer-product~~ of claim 1 wherein the ~~product comprises mixed dimers comprise~~ equal to or greater than about 60 weight percent linear alpha olefin dimers.

30. (Currently Amended) The ~~dimer-product~~ of claim 1 wherein the ~~product comprises mixed dimers comprise~~ less than about five weight percent vinylidene or tri-substituted olefins.

31. (Currently Amended) A ~~linear-alpha-olefin-dimer~~ product made by a process comprising coupling of an initial olefin and a second olefin, wherein the product comprises (a) mixed dimers, less than about five weight percent of which are vinylidene or tri-substituted olefins and ~~about equal to or greater than 20 weight percent of the initial and second olefins are converted to linear-alpha-olefin dimers~~ (b) less than about 80 weight percent initial and second olefins.

32. (Currently Amended) The ~~dimer-product~~ of claim 31 wherein the initial olefin is butene and the second olefin is butene and the ~~dimer is a~~ dimers are 1-butene ~~dimer dimers~~.

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33. (Currently Amended) The ~~dimer-product~~ of claim 31 wherein the initial olefin and the second olefin are selected from the group consisting of alpha olefins consisting of about five to about eight carbon atoms.

34. (Currently Amended) The ~~dimer-product~~ of claim 31 wherein the initial olefin and the second olefin are selected from the group consisting of alpha olefins consisting of about nine or more carbon atoms.

35. (Currently Amended) The ~~dimer-product~~ of claim 31 wherein the ~~product-comprises~~ mixed dimers comprise from about 30 to about 85 weight percent linear alpha-olefin dimers.

36. (Currently Amended) A ~~reaction-product~~ of a head to head coupling of a 1,2 insertion of a first olefin having at least 4 carbon atoms with a 2,1 insertion of a second olefin having at least 4 carbon atoms, the product comprising ~~linear-alpha-olefin-dimers and (a) mixed dimers~~, less than about 5 weight percent of which are vinylidene or tri-substituted olefins and ~~wherein about equal to or greater than 20 weight percent of the first and second olefins are converted to the linear alpha-olefin dimers (b) less than about 80 weight percent first and second olefins~~.

37. (Currently Amended) The ~~reaction-product~~ of claim 29 wherein the first and second olefins are butene.

38. (Currently Amended) The ~~reaction-product~~ of claim 29 wherein the first and second olefins have from 5 to about 8 carbon atoms.

39. (Currently Amended) The ~~reaction-product~~ of claim 29 wherein the first and second olefins have 9 or more carbon atoms.

40. (Currently Amended) The ~~reaction-product~~ of claim 29 ~~comprising-wherein the mixed dimers comprise~~ from about 30 percent to about 85 percent linear alpha-olefin dimers.

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41. (Currently Amended) The ~~reaction~~-product of claim 29 ~~comprising wherein the mixed dimers comprise~~ equal to or greater than about 60 percent linear alpha-olefin dimers.
42. (Currently Amended) The ~~reaction~~-product of claim 29 ~~comprising wherein the mixed dimers comprise~~ equal to or greater than about 70 percent linear alpha-olefin dimers.
43. (Currently Amended) A ~~reaction~~-product of a head to head coupling of a 1,2 insertion of a first olefin having at least 4 carbon atoms with a 2,1 insertion of a second olefin having at least 4 carbon atoms, the product comprising (a) mixed dimers, from about 30 to about 85 weight percent of which are linear alpha-olefin dimers and ~~wherein about equal to or greater than 20 weight percent of the first and second olefins are converted to the linear alpha-olefin dimers~~ (b) less than about 80 weight percent first and second olefins.